Navy M&S Standards Project

Brief to SIW -- 30 March 00

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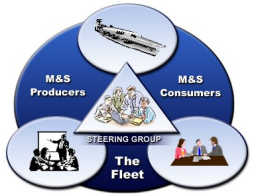
Briefing Agenda



The Benefits and Culture of Standards
The Navy M&S Standards Strategy
Process and Organization
Collaborative Opportunities
Summary

SISO Simulation Interoperability Standards Organization
www.sisostds.org

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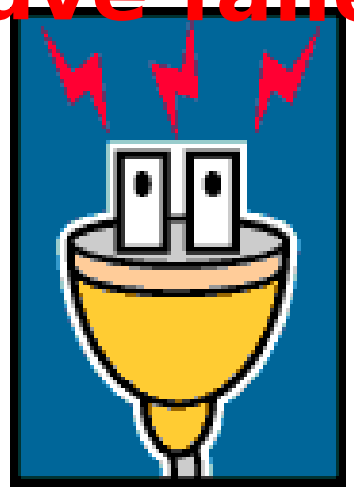
Not Every Plug Fits An Outlet

Without Standards Electrification in America would have failed



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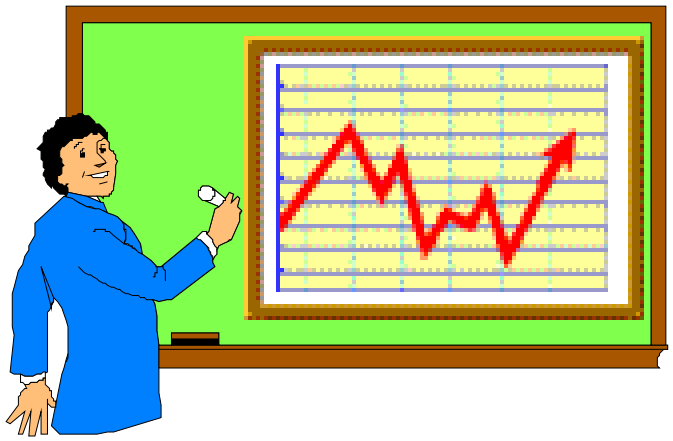
Benefits from Standards

- Reuse of M&S resources that can be adapted or reconfigured quickly
- Consistency in communicating technical elements
- Consistent depiction of the real world in your M&S software
- Ability to build M&S faster, cheaper and with less risk

Cost Savings



Interoperability

- Increased interoperability with other programs
- Increased visibility on specific areas of M&S
- Ability to retrieve and visualize common authoritative data

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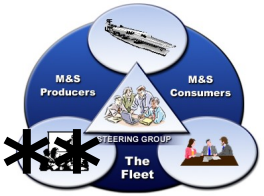
** Proven Success ** SEDRIS and MEL **



- SEDRIS describes environmental data in a clear and complete manner:
  - SEDRIS Data Representation Model (SDRM)
  - Spatial Reference Model (SRM)
  - SEDRIS Data Coding Standard (SDCS)
- SEDRIS shares and interchanges data through software facilities:
  - The Read/Write API and
  - SEDRIS Transmittal Format (STF)

Synthetic Environment Data Representation and Interchange Specification

Common Goal: Users will Discover and Order data through MEL using MEL's Standard FGDC Metadata and Receive Data either in its Native Format or in the SEDRIS Transmittal Format

Master Environmental Library

- The MEL Provides Data Discovery and Delivery through:
- Query: Use the MEL interface to locate data of interest
- Review: Review data descriptions found through MEL
- Order: Place one time orders or subscribe to data in MEL
- Receipt: Data is sent to an anonymous FTP address or picked up at data source.

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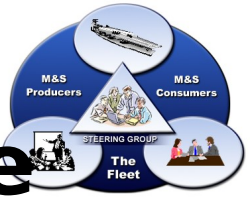
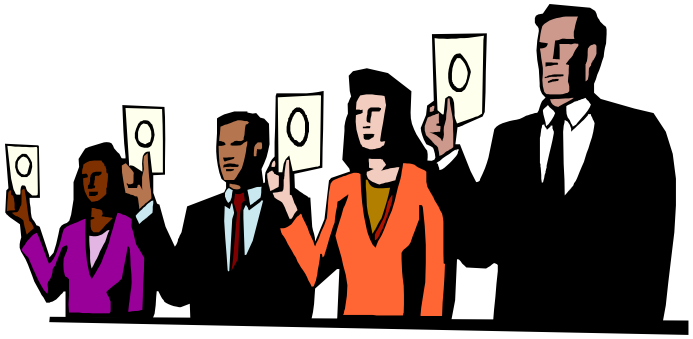
Overcoming the Culture of Change

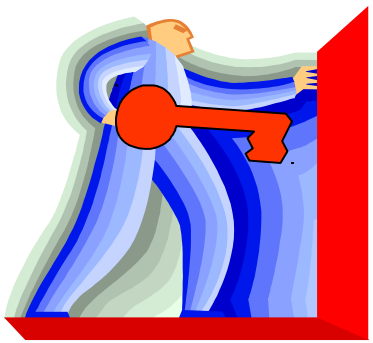


Impediments

- Concern Over the Unknown, Support for Legacy Systems
- Program Goals and Requirements vs. Budgets and Schedules
- "Not Invented Here" Syndrome
- Loss of Control Over Project
- Rapid Technological Change
- Immediate vs. Future Needs
- Local vs. Global Needs



Mitigators



- Focus on User Requirements
- Broad Based Community Participation
- Wide Community Review and Comment
- Technical Usage and Community Buy-In
- Successful testing in Realistic Situations

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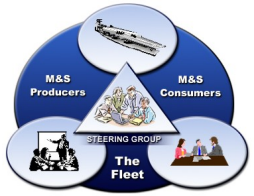
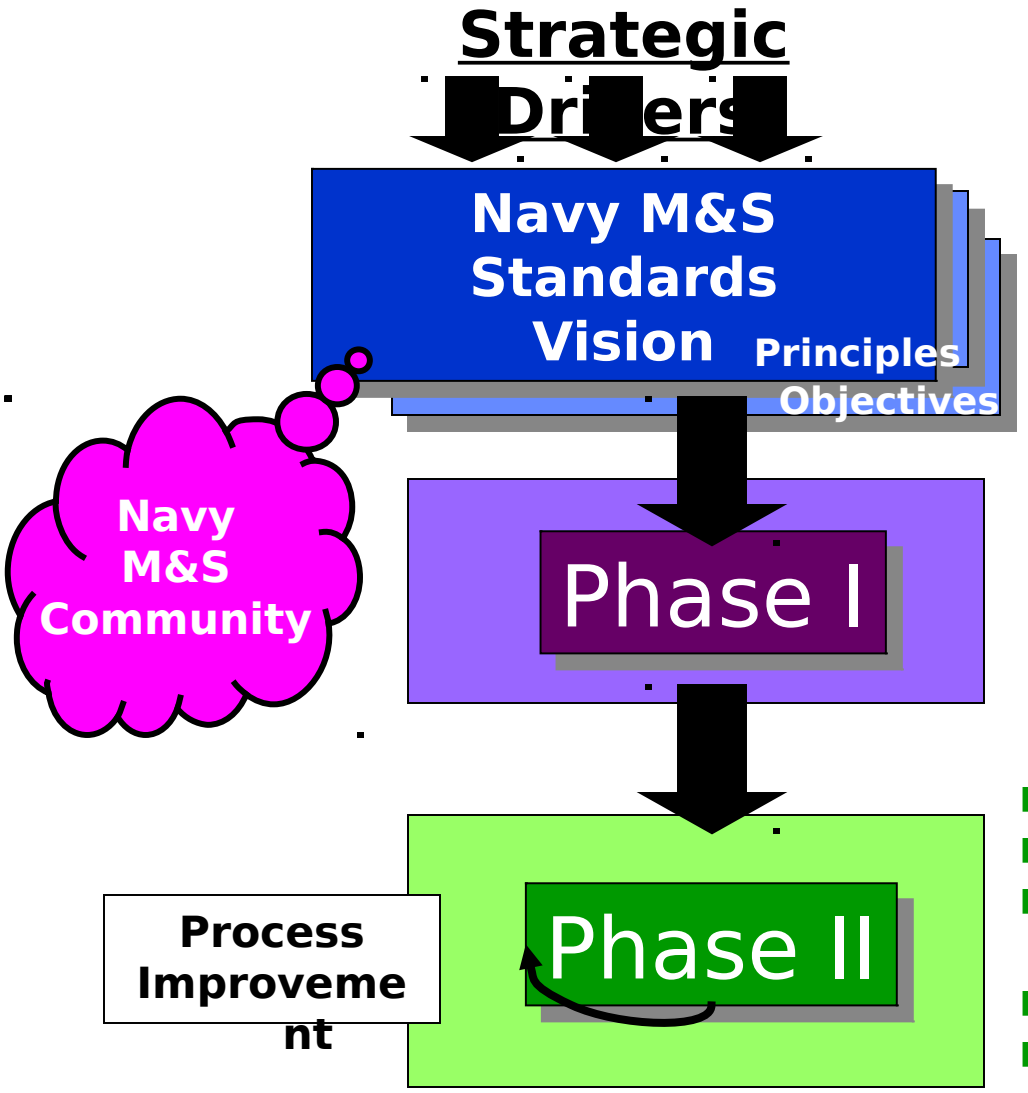
Strategy





- Input from User Community
- Program Benefits
- Assembly of Subject Matter Experts

- Discovery
- Defined Organization
- Defined Process

- Establish Organization
- Implement Process
- **Nominate** Requirements for Standards
- **Evaluate** Proposed Standards
- **Advocate** Standards
- Quality Improvement and Feedback
- On-line Capability

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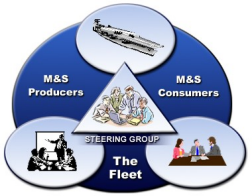
Simulation Interoperability Standards Organization
www.sisostds.org



Objectives

Interoperability
Reuse and commonality

Credibility
Consistency

Principles

Easier to use than to deviate from

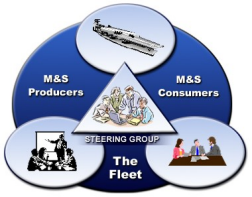
Widely accepted by the community, both technically and sociologically

Endorsed by the appropriate authorities

Project Vision

To promote a common set of standards for the use and reuse of Navy models, simulations, and data; as well as supporting protocols, techniques and

Project Objectives



- Interoperability:
  - Enable simulations to provide or accept services from one another
- Reuse and commonality:
  - Establish baseline for reusing Navy models, simulations, and associated data as well as associated protocols, techniques and processes.
- Credibility:
  - Improve acceptance of M&S representations
- Consistency
  - Consistent understanding of data and functional descriptions for use in simulated operations

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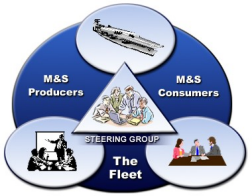
Philosophy and Approach



- Quick Success Stories
  - Solicit immediate nominations of widely accepted standards applicable to Navy M&S program requirements
  - Advertise with Project Web site and Brochures
  - Assist users with the Nomination process
- Develop short-term and long-term roadmaps
  - Inform Steering Group Members on what to expect for:
    - next 2- 6 months
    - over next 2 years
- Ensure dedication from Volunteer Force with value-added benefits:
  - Provide informative job-related presentations on related M&S topics at each steering group meeting

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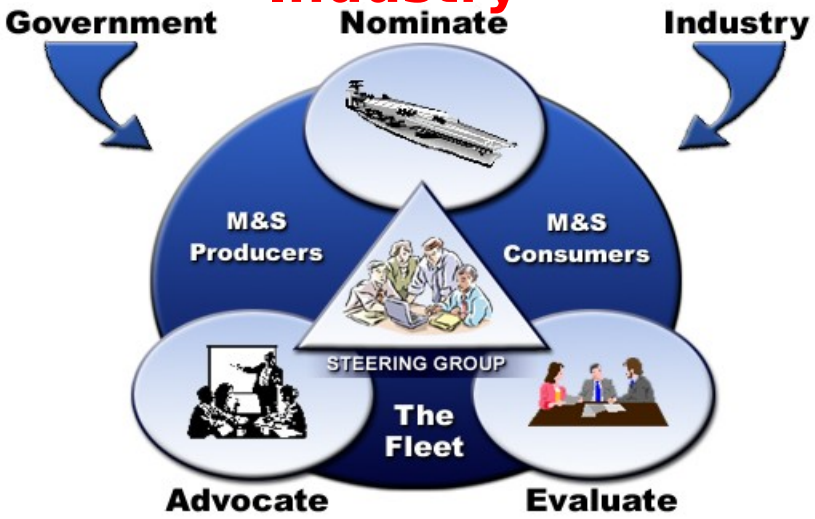
A High-Altitude Look

The Navy Modeling & Simulation Standards Project

Supported by Government and Industry

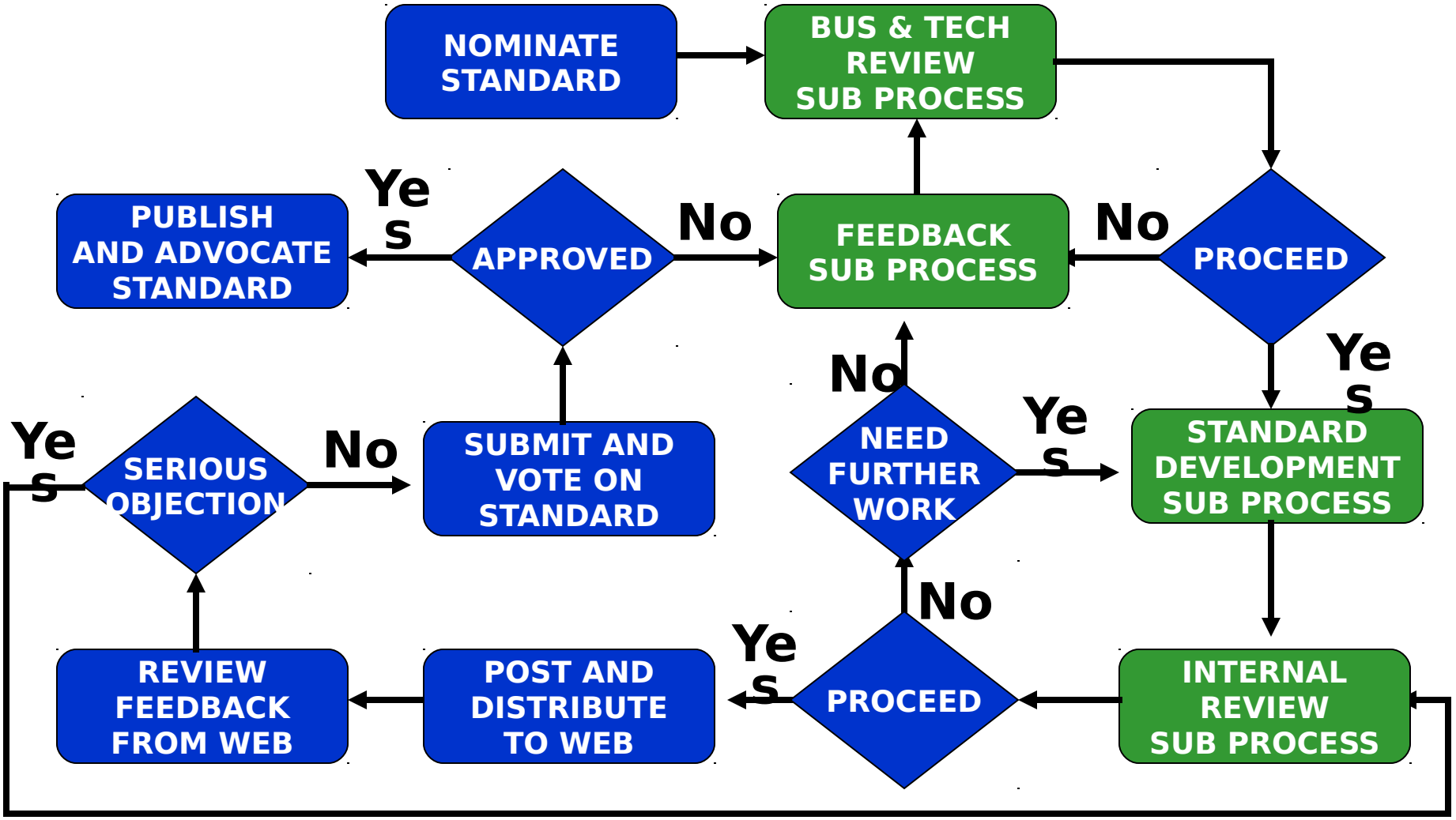


- **NOMINATE:** Identify the need for Navy M&S Standards and Best Practices.
  - **EVALUATE:** Technical Review by a team of M&S experts with feedback from M&S Community.
    - **ADVOCATE:** M&S Community Outreach and Education Program.

CONCEPT OF OPERATIONS

The Navy M&S Community and Industry are invited and encouraged to nominate M&S standards that will support the use and reuse of Navy models, simulations, and data; as well as supporting protocols, techniques and processes. The steps within the Navy's M&S Standards Process focus on three key activities to Nominate, Evaluate and Advocate Navy M&S Standards. Essential to these key elements will be automated web tools; collaboration and facilitated support to address and resolve issues; and M&S experts to review, leverage and refine the appropriate

Process Flow Overview



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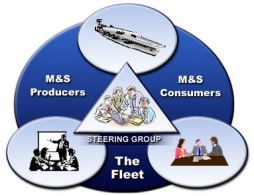
Organization

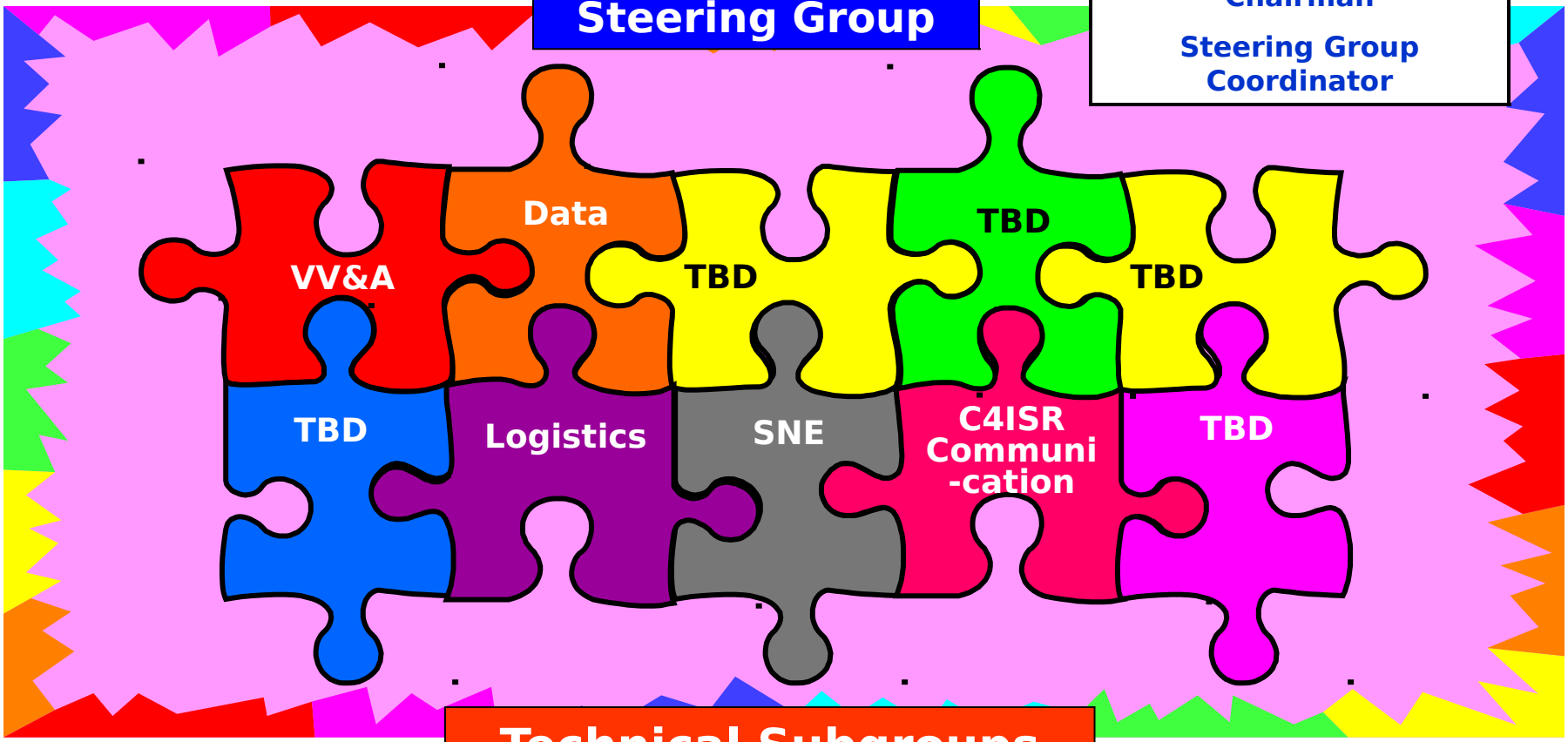


DIRECTOR, NAVMSMO

M&S Standards Steering Group

Steering Group Chairman

Steering Group Coordinator



Technical Subgroups
"Complete the Picture"

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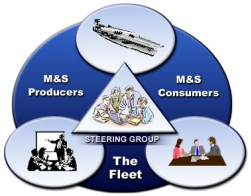
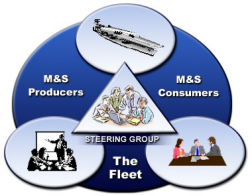
M&S Standards Support to C4ISR

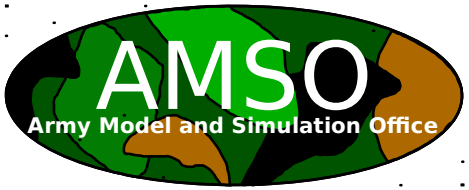


- **DEFINITION:** Encompasses the objects, algorithms and techniques necessary to emulate friendly and enemy control, communications devices, computer systems, networks, and processes

- **REQUIREMENTS**:
  - Define standards to enhance reusability and interoperability
  - Determine set of measures of performance and effectiveness (MOPs/MOEs) for communication modeling
  - Determine overlap communication requirements for Navy Modeling environment
  - Ensure standards cover HLA requirements
    - SOM/FOM development
  - Coordinate common systems representations with other categories

Collaborative Opportunities





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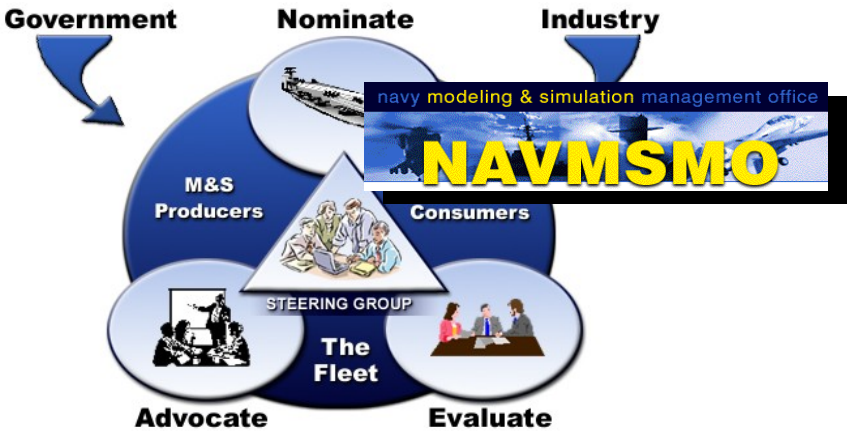

- Share lessons learned
- Opportunity for common M&S categories
- Cross reference M&S Standards Process Steps
- Consider individual Service Standards for joint applicability
- Coordinate a common M&S Standards Web application and linkage for integrated browsing and search capabilities

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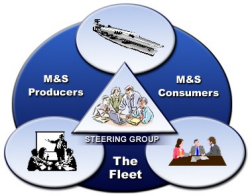
Summary Project Accomplishments



Phase I
Jul 99 – Mar 00

- Defined Organization
  - Steering Group
  - Technical Areas
  - Charter
  - Reflectors
- Defined Process
  - Conceptual and Flow
- Initial Web Site

Phase II
Mar 00 +

- Establish Organization
  - Technical Area Subgroups
- Implement Process
  - **Nominate**
    - Three Test Cases
  - **Evaluate**
    - Improving Process
  - **Advocate**
    - Collaborative Activities
- Dynamic On-line Capability
- Process Improvement

Continuous & Iterative

Summary
Project Accomplishments

NAVMSMO - Navy Modeling & Simulation Management Office - Microsoft Internet Expl
File Edit View Favorites Tools Help
Back Forward Stop Refresh Home Search Favorites History Mail
Address http://navmsmo.hq.navy.mil/
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news & events
Browse through our M&S events calendar and weekly news briefs.
help desk
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policy & guidance
Planning documents and guidance from the Navy and DoD.
resource library
Links to M&S publications, briefings, journals, Internet sites, databases, and images.
about NAVMSMO
Our mission, goals, and objectives.
NEW Explore the Navy M&S Standards Project
Navy M&S Standards
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your internet resource for Navy M&S information
Welcome to the Navy Modeling and Simulation Management Office (NAVMSMO)! The NAVMSMO Web site serves as a central repository for collecting,
Downloading picture http://navmsmo.hq.navy.mil/gifs/main/navmsmo.gif...
Start
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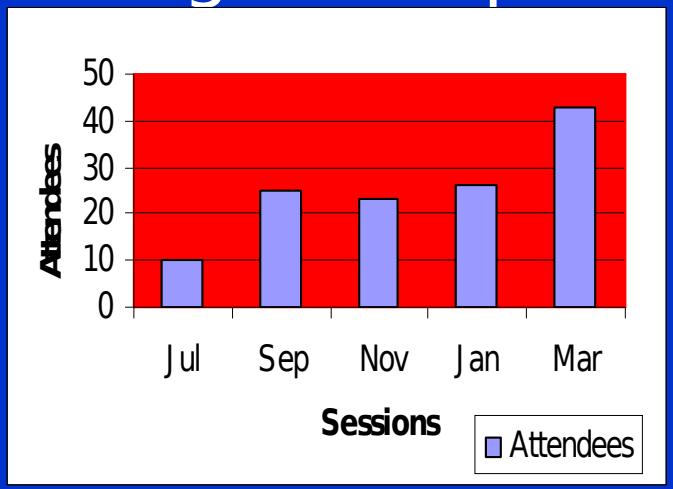
Web link available from NAVMSMO:

- **Link under Policy & Guidance**
- **News Item**

Strong Participation



Steady and Growing Steering Group

http://navmsmo.hq.navy.mil/policy/standards

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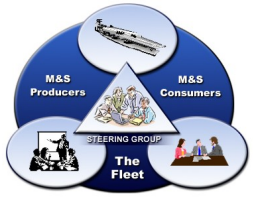
Reflectors



- Navy M&S Steering Group Reflector
  - Address: ssg@navmsmo.hq.navy.mil
  - For members of Navy M&S Steering Group
  - Subscription automatic for members

- General Interest M&S Steering Group Reflector
  - Address: **nsg@navmsmo.hq.navy.mil**
  - For anyone interested in Navy M&S Standards
  - To subscribe:
    - Send a message to: nsg-request@navmsmo.hq.navy.mil with "Subscribe" or "Join" in the body of the message OR
    - If you encounter problems please contact the NMSIS Web Master.

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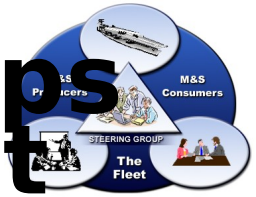
Technical Subgroups Points of Contact



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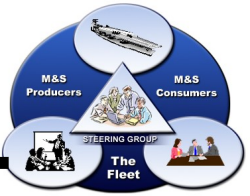
Project Points of Contact



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